

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                   1 (currently amended): A distributed sensing system in a networked environment  
2 for identifying an analyte, said system comprising:

3                   a first sensor array connected to said network comprising sensors capable of  
4 producing a first response in the presence of a chemical stimulus;

5                   a second sensor array connected to said network comprising sensors capable of  
6 producing a second response in the presence of a physical stimulus, wherein each sensor of said  
7 second sensor array is an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor  
8 or combinations thereof;

9                   a computer connected to said network;

10                  a computer readable algorithm for execution by said computer for identifying said  
11 analyte, said computer readable algorithm comprising

12                   instructions for comparing said first response and said second response  
13 with a known response, and

14                   instructions for identifying an unknown analyte.

1                   2 (original): The system according to claim 1, wherein said algorithm selects the  
2 most relevant sensor modality in said first and said second array to identify said analyte.

1                   3 (original): The system according to claim 1, wherein each sensor of said first  
2 sensor array is a member selected from the group consisting of a bulk conducting polymer film, a  
3 semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a  
4 quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated  
5 polymeric coatings on optical fiber and combinations thereof.

1                   4 (original): The system according to claim 1, wherein each sensor of said  
2 second sensor array is a member selected from the group consisting of an optical sensor, a  
3 mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.

1                   5 (original): The system according to claim 3, wherein each sensor of said first  
2 sensor array is a conducting/nonconducting regions sensor.

6 (canceled)

1                   7 (original): The system according to claim 1, wherein the transmission of said  
2 first response is conducted via wired communications.

1                   8 (original): The system according to claim 1, wherein the transmission of said  
2 first response is conducted via wireless communications.

1                   9 (original): The system according to claim 8, wherein said wireless  
2 communications are implemented using communications technologies selected from a member  
3 of a group consisting of infrared technology, satellite technology, microwave technology and  
4 radio wave technology.

1                   10 (original): The system according to claim 1, wherein said networked  
2 environment is a member selected from the group consisting of a worldwide computer network,  
3 an internet, the Internet, a wide area network, a local area network, an intranet and combinations  
4 thereof.

1                   11 (original): The system according to claim 1, wherein said networked  
2 environment is the Internet.

1                   12-18 (withdrawn)

1                   19 (currently amended): A method for transferring a combination of chemical  
2 and physical data over a computer network for identification of an analyte, said method  
3 comprising:  
4                   transmitting sensory data from a first sensor array comprising sensors capable of  
5 producing a first response in the presence of a chemical stimulus to a remote location;  
6                   transmitting physical data from a second sensor array comprising sensors capable  
7 of producing a second response in the presence of a physical stimulus to a remote location,  
8 wherein each sensor of said second sensor array is an optical sensor, a mechanical sensor, a  
9 radiation sensor, a thermal sensor or combinations thereof; and  
10                  processing said sensory and physical data at said remote location for identification  
11 of an analyte, wherein said processing comprises  
12                  comparing said first response and said second response with a known  
13 response, and  
14                  identifying an unknown analyte.

1                   20 (original): The method according to claim 19, further comprising employing a  
2 sensor selection algorithm to determine sensors in said first array.

1                   21 (original): The method according to claim 19, wherein each sensor of said  
2 first sensor array is a member selected from the group consisting of a bulk conducting polymer  
3 film, a semiconducting polymer sensor, a surface acoustic wave device, a fiber optic  
4 micromirror, a quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye  
5 impregnated polymeric coatings on optical fiber and combinations thereof.

1                   22 (original): The method according to claim 19, wherein each sensor of said  
2 second sensor array is a member selected from the group consisting of an optical sensor, a  
3 mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.

1                   23 (currently amended): A distributed sensing system in a networked  
2 environment for identifying an analyte, said system comprising:  
3                   a first sensor array connected to said network comprising sensors capable of  
4 producing a first response in the presence of a chemical stimulus, wherein said first sensor is  
5 connected with said network via a wireless connection;  
6                   a second sensor array connected to said network comprising sensors capable of  
7 producing a second response in the presence of a physical stimulus, wherein each sensor of said  
8 second sensor array is an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor  
9 or combinations thereof;  
10                  a computer connected to said network;  
11                  computer readable instructions for execution by said computer for identifying said  
12 analyte, said computer readable instructions comprising  
13                   instructions for comparing said first response and said second response  
14                   with a known response, and  
15                   instructions for identifying an unknown analyte.

1                   24 (previously presented): A distributed sensing system in a networked  
2 environment for identifying an analyte, said system comprising:  
3                   a first sensor array connected to said network comprising sensors capable of  
4 producing a first response in the presence of a chemical stimulus;  
5                   a second sensor array connected to said network comprising sensors capable of  
6 producing a second response in the presence of a physical stimulus, wherein one of said sensors  
7 in said second sensor array is an infrared sensor;  
8                   a computer connected to said network;  
9                   computer readable instructions for execution by said computer for identifying said  
10 analyte, said computer readable instructions comprising

11 instructions for comparing said first response and said second response  
12 with a known response, and  
13 instructions for identifying an unknown analyte.

1 25 (previously presented): A distributed sensing system in a networked  
2 environment for identifying an analyte, said system comprising:  
3 a first sensor array connected to said network comprising sensors capable of  
4 producing a first response in the presence of a chemical stimulus, wherein said first sensor is  
5 connected with said network via a wireless connection;  
6 a second sensor array connected to said network comprising sensors capable of  
7 producing a second response in the presence of a physical stimulus, wherein one of said sensors  
8 in said second sensor array is an infrared sensor;  
9 a computer connected to said network;  
10 computer readable instructions for execution by said computer for identifying said  
11 analyte, said computer readable instructions comprising  
12 instructions for comparing said first response and said second response  
13 with a known response, and  
14 instructions for identifying an unknown analyte.

*David*